

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER) BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY, FLORIDA PRODUCT CONTROL SECTION 11805 SW 26 Street, Room 208 Miami, Florida 33175-2474 T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/economy

Kawneer Company, Inc. 555 Guthridge Court Norcross, GA 30092

Scope:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami-Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami-Dade County) and/ or the AHJ (in areas other than Miami-Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code. This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Series '7¹³/₁₆" deep 1600 System 2' Aluminum Curtain Wall - L.M.I.

APPROVAL DOCUMENT: Drawing No. 1791, titled Series "1600 System 2 Curtain Wall (L.M.I.)", sheets 01 through 16 of 16, dated 04/23/12, prepared by W.W. Schaefer Engineering & Consulting, P. A., signed and sealed by Warren W. Schaefer, P. E., bearing the Miami-Dade County Product Control Section Revision stamp with the Notice of Acceptance number and Expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state, series, and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/ or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA No. 12-0622.11 and consists of this page 1 and evidence pages E-1, E-2 and E-3, as well as approval document mentioned above.

The submitted documentation was reviewed by Jaime D. Gascon, P. E.



J. GASCOP

NOA No. 14-0430.25 Expiration Date: June 09, 2015 Approval Date: September 04, 2014 Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

A. DRAWINGS

- 1. Manufacturer's die drawings and sections.

 (Submitted under previous NOA No. 04–0908.05)
- 2. Drawing No. 1791, titled Series "1600 System 2 Curtain Wall (L.M.I.)", sheets 01 through 16 of 16, dated 04/23/12, prepared by W.W. Schaefer Engineering & Consulting, P. A., signed and sealed by Warren W. Schaefer, P. E. (Submitted under previous NOA No. 12-0622.11)

B. TESTS

- 1. Test reports on: 1) Air Infiltration Test, per FBC, TAS 202–94
 - 2) Uniform Static Air Pressure Test, Loading per FBC TAS 202-94
 - 3) Water Resistance Test, per FBC, TAS 202-94
 - 4) Small Missile Impact Test per FBC, TAS 201-94
 - 5) Large Missile Impact Test per FBC, TAS 201-94
 - 6) Cyclic Wind Pressure Loading per FBC, TAS 203-94
 - 7) Forced Entry Test, per FBC 2411 3.2.1, TAS 202-94

along with marked-up drawings and installation diagram of a multiple span Kawneer 1600 System $2 - 2^{1}/2$ " x $7^{13}/16$ " deep, pressure plate aluminum curtain wall system, 202" wide x 341" high x 64" return, specimen no. 1, Elevation 1 & 2, Glass types: A, B, C, D & E, marked-up by Hurricane Test Laboratory, Inc. Test Report No. HTL-0049-0512-03, dated 05/13/03, signed and sealed by Vinu J. Abraham, P. E. (Submitted under previous NOA No. 04-0908.05)

2. Test reports on: 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202–94 along with marked-up drawings and installation diagram of a multiple span Kawneer 1600 System2 – 2¹/₂" x 7¹³/₁₆" deep, pressure plate aluminum curtain wall system, 182¹/₂" wide x 167" high, specimen no. 1, Elevation 3A, Glass types: A & B, marked-up by Hurricane Test Laboratory, Inc. Test Report No. HTL-0049-0423-03, dated 4/22-10/1-03, signed and sealed by Vinu J. Abraham, P. E.

(Submitted under previous NOA No. 04-0908.05)

- 3. Test reports on: 1) Small Missile Impact Test per FBC, TAS 201–94
 - 2) Large Missile Impact Test per FBC, TAS 201-94
 - 3) Cyclic Wind Pressure Loading per FBC, TAS 203-94

along with marked-up drawings and installation diagram of a multiple span Kawneer 1600 System $2 - 2^1/2$ " x $7^{13}/16$ " deep, pressure plate aluminum curtain wall system, $182^1/2$ " wide x 167" high, specimens no. 1 and no. 2, Elevations 3A and 3B respectively, Glass types: A & B and A & D respectively, marked-up by Hurricane Test Laboratory, Inc. Test Report No. HTL-0049-1003-03, dated 4/22-10/3-03, signed and sealed by Vinu J. Abraham, P. E.

(Submitted under previous NOA No. 04-0908.05)

Jaime D. Gascon, P. E. Product Control Section Supervisor NOA No. 14–0430.25 Expiration Date: June 09, 2015

Approval Date: September 04, 2014

Kawneer Company, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

C. CALCULATIONS

1. Anchor verification calculations and structural analysis, complying with FBC, prepared by W.W. Schaefer Engineering & Consulting, P. A., dated 04/17/12, signed and sealed by Warren W. Schaefer, P. E.

(Submitted under previous NOA No. 12-0622,11)

2. Glazing complies with ASTM E1300-98/04/09

D. QUALITY ASSURANCE

1. Miami-Dade Department of Regulatory and Economic Resources (RER).

E. MATERIAL CERTIFICATIONS

- 1. Notice of Acceptance No. 14–0423.16 issued to Eastman Chemical Company (MA) for their "Saflex HP Clear or Color Glass Interlayers" dated 06/19/14, expiring on 04/14/18.
- 2. Trelleborg Part No. BRM-270400 EPDM exterior glazing gasket complying with ASTM C864 Option II exceptions, ASTM D412 1509 PSI; D395B 22 HRS @ 70°F 16%; ASTM D 2240 Type A 70; ASTM D 573 70 HRS @ 100°C +2.0%, -9.2% and + 6 pts.; ASTM D 624-Die-C 101.7 ppi; ASTM D 1149 100 HRS/ 100pphm @ 40°C 20% No Cracks; ASTM D746 max. -42.8°C; ASTM D 926 No Migration Stain and ASTM C 1166 No Limit.

(Submitted under previous NOA No. 12-0622.11)

3. Test Reports No.'s ARDL-PN-74740-A and ARDL-PN-7474-BB, issued and prepared by Akron Rubber Development Laboratory, Inc., dated 08/21/02, for TREMCO EPDM exterior glazing gasket complying with ASTM C864 Option II exceptions, ASTM D412 1871 PSI, D395B 22 HRS 100°C 14.4%; ASTM D 573 70 HRS @ 100°C -5.0%, -2.2% and + 4 pts.; ASTM D 624-Die-C 162.2 ppi; ASTM D 1149 100 HRS/ 100pphm @ 40°C 20% No Cracks; ASTM D746 max. -58°C; ASTM D 926 No Migration Stain and ASTM C 1166 No Limit, dated 08/28/07 and 09/04/07, both signed by Jim Drummond.

(Submitted under previous NOA No. 10-0406.05)

F. STATEMENTS

1. Statement letter of conformance and complying with FBC 5th Edition (2014), issued by W.W. Schaefer Engineering & Consulting, P. A., dated 04/14/14, signed and sealed by Warren W. Schaefer, P. E.

2. Statement letter of conformance and complying with FBC-2010, issued by W.W. Schaefer Engineering & Consulting, P. A., dated 06/19/12, signed and sealed by Warren W. Schaefer, P. E.

(Submitted under previous NOA No. 12-0622.11)

Jaime D. Gascon, P. E. Product Control Section Supervisor

NOA No. 14-0430,25

Expiration Date: June 09, 2015 Approval Date: September 04, 2014

Kawneer Company, Inc.

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

F. STATEMENTS (CONTINUED)

- 3. Statement letter of no financial interest, issued by W.W. Schaefer Engineering & Consulting, P. A., dated 02/28/12, signed and sealed by Warren W. Schaefer, P. E. (Submitted under previous NOA No. 12-0622.11)
- 4. Notification of successor engineer per section 61g15–27.001 of the Florida Administrative Code, notifying original engineer that the successor engineer is assuming full professional and legal responsibility for all engineering documents pertaining to the curtain wall system 1600 System 1 & 2 of Kawneer Company, Inc., dated 02/29/12, signed and sealed by Warren W. Schaefer, P. E. (Submitted under previous NOA No. 12–0622.11)
- 4. Laboratory compliance letter for Test Reports No.'s HTL-0049-0423-03, HTL-0049-0512-03 and HTL-0049-1003-03 all issued by Hurricane Test Laboratory, LLC, dated 06/21/04, all signed and sealed by Vinu J. Abraham, P. E. (Submitted under previous NOA No. 04-0908.05)
- 5. Proposal No. 01–0092, acceptance letter dated 07/30/01, issued by this Office and signed by Jaime Gascon.

 (Submitted under previous NOA No. 04–0908.05)

G. OTHERS

1. Notice of Acceptance No. 12-0622.11, issued to Kawneer Company, Inc., for their Series "1600 System 2 Aluminum Curtain Wall – L.M.I.", approved on 09/06/12 and expiring on 06/09/15.

Jaime D. Gascon, P. E. Product Control Section Supervisor

NOA No. 14-0430.25

Expiration Date: June 09, 2015 Approval Date: September 04, 2014

GENERAL NOTES:

- THESE CURTAIN WALL SYSTEMS HAVE BEEN TESTED, ANALYZED & APPROVED FOR DESIGN PRESSURES NOT TO EXCEED THOSE SHOWN IN THE "ALLOWABLE DESIGN PRESSURE
- OPÉNINGS, BUCKING & BUCKING FASTENERS MUST BE PROPERLY DESIGNED & INSTALLED TO TRANSFER WIND LOADS TO THE STRUCTURE.
- 3. ALL HARDWARE & FASTENERS SHALL BE IN ACCORDANCE WITH THESE DRAWINGS & SHALL NOT VARY UNLESS SPECIFICALLY MENTIONED ON THE DRAWINGS. SPECIFIED ANCHOR EMBED TO BASE MATERIAL SHALL BE BEYOND WALL FINISH OR STUCCO.
- THE DETAILS & SPECIFICATIONS SHOWN HEREIN REPRESENT THE PRODUCTS TESTED & PROPOSED FOR WATER, AIR, IMPACT, CYCLIC & UNIFORM STATIC AIR PRESSURE TESTING IN CONFORMANCE WITH THE FLORIDA BUILDING CODE PROTOCALS TAS-201, 202 & 203 FOR LARGE MISSILE IMPACT CURTAIN WALL SYSTEMS.
- 5. THESE CURTAIN WALL SYSTEMS HAVE BEEN DESIGNED IN ACCORDANCE WITH AND MEET THE REQUIREMENTS OF THE FLORIDA BUILDING CODE (FBC) INCLUDING HIGH VELOCITY HURRICANE ZONES (HVHZ).
- 6. IMPACT SHUTTERS ARE NOT REQUIRED WITH THIS CURTAIN WALL SYSTEM.
- DETERMINE THE POSITIVE & NEGATIVE DESIGN LOADS TO USE WHEN REFERENCING THESE DOCUMENTS IN ACCORDANCE WITH THE GOVERNING CODE AND GOVERNING WIND VELOCITY. FOR WIND LOAD CALCULATIONS IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, A DIRECTIONALITY FACTOR OF Kd = 0.85 MAY BE APPLIED PER THE ASCE-7 STANDARD.
- 8. NO INCREASE IN ALLOWABLE STRESS HAS BEEN USED IN THE CERTIFICATION OF THIS PRODUCT. WIND LOAD DURATION FACTOR Cd = 1.6 WAS USED FOR WOOD SCREW LOAD VERIFICATION ONLY.
- 9. MATERIALS, INCLUDING BUT NOT LIMITED TO STEEL SCREWS, THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS OF FLORIDA BUILDING CODE CHAPTER 20.
- 10. THERE SHALL BE NO LIMIT TO THE NUMBER OF HORIZONTAL & VERTICAL PANELS USED FOR ANY JOB PROVIDING ALL RESTRICTIONS ARE MET PER THE ELEVATIONS.

CORNER CONSTRUCTION:

STANDARD FRAMING AT TOP & BOTTOM HORIZONTAL MEMBERS: VERTICAL MEMBERS RUN THROUGH WHILE THE HORIZONTAL MEMBERS ARE SQUARE CUT, BUTTED AND MECHANICALLY FASTENED TO THE VERTICAL MEMBERS VIA A SHEAR BLOCK (ITEM #12). THE SHEAR BLOCK IS MECHANICALLY FASTENED TO THE VERTICAL FRAME MEMBER WITH 2 NO. 12 X 1 7/8" FHTF SCREWS. THE HORIZONTAL FRAME MEMBERS ARE ATTACHED TO THE SHEAR BLOCK WITH 2 NO. 12 X 7/8" PHTF SCREWS. CORNERS ARE SEALED WITH DOW 795 SILICONE SEALANT.

STANDARD FRAMING AT INTERMEDIATE HORIZONTAL MEMBERS: HORIZONTAL MEMBERS ARE SQUARE CUT, BUTTED AND MECHANICALLY FASTENED TO THE VERTICAL FRAME MEMBERS VIA A SHEAR BLOCK (ITEM #13). THE SHEAR BLOCK IS MECHANICALLY FASTENED TO THE VERTICAL FRAME MEMBER WITH 2 NO. 12 X 1 7/8" FHTF SCREWS, THE INTERMEDIATE HORIZONTAL FRAME MEMBERS ARE ATTACHED TO THE SHEAR BLOCK WITH 2 NO. 12 X 7/8" FHTF SCREWS, CORNERS ARE SEALED WITH DOW 795 SILICONE SEALANT. TYPICAL 90 DEGREE CORNER FRAMING: VERTICAL CORNER MEMBERS RUN THROUGH WHILE THE HORIZONTAL MEMBERS ARE MITER CUT, BUTTED AND MECHANICALLY FASTENED TO THE VERTICAL MEMBERS VIA A SHEAR BLOCK (ITEM #14). THE SHEAR BLOCK IS MECHANICALLY FASTENED TO THE VERTICAL CORNER FRAME MEMBERS WITH 3 NO. 12 X 7/16" PHTF SCREWS. THE HORIZONTAL FRAME MEMBERS ARE ATTACHED TO THE SHEAR BLOCK WITH 2 NO. 12 X 1/2" FHTF SCREWS. CORNERS ARE SEALED WITH DOW 795 SILICONE SEALANT. <u>90 DEGREE CORNER FRAMING AT SPLICE JOINT LOCATIONS: VERTICAL CORNER MEMBERS</u> RUN THROUGH WHILE THE HORIZONTAL MEMBERS ARE MITER CUT, BUTTED AND MECHANICALLY FASTENED TO THE VERTICAL MEMBERS VIA A SHEAR BLOCK (ITEM #16). THE SHEAR BLOCK IS MECHANICALLY FASTENED TO THE VERTICAL CORNER FRAME MEMBERS WITH 2 NO. 12 X 7/16" PHTF SCREWS (2 PER SHEAR BLOCK). THE HORIZONTAL FRAME MEMBERS ARE ATTACHED TO THE SHEAR BLOCK WITH 2 NO. 12 X 1/2" FHTF SCREWS (2 PER SHEAR BLOCK). CORNERS ARE SEALED WITH DOW 795 SILICONE SEALANT. STANDARD FRAMING AT SPLICE JOINT LOCATIONS: VERTICAL MEMBERS RUN THROUGH WHILE THE HORIZONTAL MEMBERS ARE SQUARE CUT, BUTTED AND MECHANICALLY FASTENED TO THE VERTICAL MEMBERS VIA A SHEAR BLOCK (ITEM #15). THE SHEAR BLOCK IS MECHANICALLY FASTENED TO THE VERTICAL CORNER FRAME MEMBERS WITH 2 NO. 12 X 1 7/8" PHTF SCREWS (2 PER SHEAR BLOCK). THE HORIZONTAL FRAME MEMBERS ARE ATTACHED' TO THE SHEAR BLOCK WITH 2 NO. 12 X 1/2" FHTF SCREWS (2 PER SHEAR BLOCK). CORNERS ARE SEALED WITH DOW 795 SILICONE SEALANT.

PRODUCT REVISED as complying with the Florida Building Code 14-04
Acceptence No 14-04
Expiration Date 26/09 + Men Dris Miami Dade Product Control

MAXIMUM ALLOWABLE FRAMING MEMBER DEFLECTION

L/180 (SPAN OF MEMBER DIVIDED BY 180)

NOTE: THIS IS THE MAXIMUM ALLOWABLE DEFLECTION AS RESTRICTED BY THE BUILDING CODE. IF JOB CONDITIONS REQUIRE LESS DEFLECTION, THE JOB CONDITIONS SHALL CONTROL.

	ANCHOR REQUIREMENTS TABLE						
	(SINGLE & MULTI-SPAN REINFORCED CURTAIN WALLS)						
	OPENING TYPE (SUBSTRATE)	FRAME/CLIP TO OPENING FASTENER TYPE	EMBED	MINIMUM EDGE DIST.	DATE		
	F-PERIMETER ANCHOR SCREWS						
	MIN. 16 GA. 50 KSI METAL STUD	1/4-14 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"	6	4	
	MIN. 2X6 WOOD FRAME OR BUCK (MIN. GR. 2 & G=0.55)	1/4" DIA. GR. 5 COARSE THREAD · SCREW	1 1/4"	3/4"	PTION		
	MIN. 1/8" THK A36 STEEL	1/4-14 OR 20 GR. 5 SELF TAP/DRILL SCREW	FULL	1/2"	SCRIF		
	MIN. 3000 PSI CONCRETE	(1) 3/8" CONCRETE SCREW ANCHOR	2 1/2"	2 1/2"	낊	l	
_	MIN. C-90 CMU FILLED WITH MIN. 2500 PSI CONCRETE	(1) 3/8" CONCRETE SCREW ANCHOR	2 1/2"	2 1/2"	SEVISION		
;	T & F-ANCHOR SCREWS/BOLTS (VERTICAL MEMBER ENDS)						
-	MIN. 1/8" THK A36 STEEL	1/4"-120 OR 14 430 SS HCMS OR GR. 5 CS THREAD FORMING SCREW	FULL	3/4"	Š		
		1/4" GR. 5 CS OR 410 SS BOLT WITH LOCK WASHER & NUT	FULL	3/4"			
-		1/2"-13 300 SS HCMS OR GR. 5 CS THREAD FORMING SCREW	FULL	1"			
		1/2" GR. 5 CS OR 410 SS BOLT WITH LOCK WASHER & NUT	FULL	1"			
	(2) MIN. 3000 PSI CONCRETE	(1) 1/2" CONCRETE SCREW ANCHOR	3 1/2"	SEE DETAILS			
	(1) 1/2" CONCRETE SCREWS SHALL BE SIMPSON STRONG—TIE TITAN HD SCREW ANCHOR (GALVANIZED STEEL).						

(2) MINIMUM CONCRETE SLAB THICKNESS FOR PLACEMENT OF "T" & "F" ANCHORS IS 5 1/2".

MAXIMUM ALLOWABLE DESIGN PRESSURE (MULTI & SINGLE SPAN CURTAIN WALL)

+60/-60 PSF

1. THE ABOVE STATED PRESSURES ARE THE MAXIMUM ALLOWED ON ANY JOB REGARDLESS OF WHAT THE JOB SPECIFIC DESIGN RESULTS MAY SHOW. INCREASE OF ALLOWABLE DESIGN PRESSURE ON ANY JOB IS CONSIDERED OUTSIDE THE SCOPE OF THIS APPROVAL. SEE "MULTI-SPAN OR SINGLE SPAN WALL NOTES" ON SHEETS 2 & 4 FOR ACTUAL JOB DESIGN CONDITIONS.

ANCHOR

DESCRIPTION

STANDARD WIND LOAD ANCHOR

STANDARD DEAD LOAD ANCHOR

CORNER DEAD LOAD ANCHOR

STANDARD T-ANCHOR

CORNER T-ANCHOR

SEE SHEETS 5-9 FOR DETAILS OF

CORNER WIND LOAD ANCHOR

ANCHOR LEGEND

ANCHOR

SYMBOL

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ANCHORS

DRAWING USE INSTRUCTIONS:

- DETERMINE IF THE WALL SYSTEM IS TO BE A MULTI-SPAN OR SINGLE SPAN CONDITION. IF MULTI-SPAN, ALL CONDITIONS SHOWN ON SHEETS 2 & 3 SHALL APPLY. IF A SINGLE SPAN, ALL CONDITIONS SHOWN ON SHEET 4
- CONDITIONS MAY NOT BE MIXED BETWEEN WALL SYSTEM TYPES. ALLOWABLE GLASS PRESSURE SHALL BE CONSIDERED WITH ALL WALL CONDITIONS AND SHALL CONTROL IF LESS THAN THOSE ALLOWABLE PRESSURES STATED FOR THE APPLICABLE FRAMING SYSTEM.

FREE SPANNING JAMB PERIMETER SEALANT NOTE (APPLICABLE TO ELEVATION ON ALL FREE SPANNING PERIMETER FRAME MEMBERS): WHEN THERE IS NO CONTINUOUS JAMB SUPPORT, THE MINIMUM & MAXIMUM ALLOWABLE SPACE BETWEEN JAMB FRAME MEMBERS & THE OPENING SUBSTRATE OR FINISHES SHALL BE SPECIFIED BY THE ENGINEER OR ARCHITECT OF RECORD FOR EACH JOB BUT SHALL NOT BE LESS THAN 1/2" NOR GREATER THAN 1 3/8". WHEN CONSIDERING TYPE, DEPTH & JOINT SPAN OF SEALANT, THE ENGINEER/ARCHITECT SHALL TAKE INTO CONSIDERATION THE DEFLECTION OF THE JAMB MEMBER THAT WOULD OCCUR WHILE SUPPORTING THE JOB REQUIRED DESIGN WIND PRESSURE. ALSO TO BE CONSIDERED SHALL BE THE MATERIALS & SURFACES TO THE MATERIALS OF A POLICE OF A POLICE OF THE MATERIALS. WHICH THE SEALANT WILL BE APPLIED.

> PRODUCT REVISED as complying with the Florida Building Code Acceptance No 12-0622 Expiration Date 06/09/2015

NOTE: INFORMATION ON THIS SHEET APPLIES TO ALL ELEVATIONS.

bus Miami Dade Product Control

DRAWING NO. 1791 SHEET NO. or 16

W.W.S.

01/23/12

EER COMPAN GUTHRIDGE (SROSS, GA 770-449-555

(L.M.I.)

WALL

CURTAIN

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SYSTEM

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SULTANTS
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2012

VERTICAL MEMBER REINFORCEMENT LEGEND

F-ANCHOR (FRAME MEMBER ENDS)

- R1 = REINFORCEMENT PART NUMBER 29
- R2 = REINFORCEMENT PART NUMBER 29 & 30
- [R3] = REINFORCEMENT PART NUMBER 31

SEE PARTS DRAWINGS & PARTS LIST FOR APPLICABLE REINFORCEMENT MEMBERS & THEIR DETAIL

I, WITH EACH APPLICABLE JOB, SHOP DRAWINGS SHALL BE PREPARED AND CERTIFIED BY A LICENSED ENGINEER EXPERIENCED WITH CURTAIN WALL DESIGN 2. THE RESPONSIBLE ENGINEER SHALL DESIGN THE WALL SYSTEM SEPARATELY FOR EACH JOB & CONFIRM THAT ALL CONDITIONS STATED HERE—IN HAVE BEEN

3. IN HIS/HER DESIGN, THE RESPONSIBLE ENGINEER SHALL VERIFY THE INTEGRITY OF ALL CONNECTIONS AND FRAMING MEMBERS & SHALL TAKE FULL RESPONSIBILITY FOR THE INTEGRITY OF THE SYSTEM DESIGN AS A WHOLE WHILE NOT ALLOWING THE CONDITIONS STATED HERE-IN TO BE EXCEEDED. ALLOWABLE SUPPORT REACTIONS

4. THE CURTAIN WALL DESIGN ENGINEER SHALL CONSIDER ALL APPLICABLE REACTION LOADS IN HIS/HER DESIGN WHILE NOT ALLOWING THE REACTIONS RESULTING FROM

WIND LOADS TO EXCEED THOSE SPECIFIED IN THE ANCHOR REACTION LOAD TABLE.

5. THE WORSE CASE OF THE CONDITIONS SPECIFIED IN THIS PRODUCT APPROVAL DRAWING AND THOSE DETERMINED BY THE INOMIDUAL JOB ENGINEER'S ANALYSIS & DESIGN SHALL CONTROL AS APPLICABLE FOR THE ACTUAL JOB.

6. REGARDLESS OF JOB DETERMINED MEMBER STRESS & DEFLECTION CONDITIONS, THE FOLLOWING SHALL APPLY:

REINFORCEMENT TYPE R1 MUST BE PLACED BETWEEN SUPPORTS IN ALL SIDE JAMB & INTERMEDIATE VERTICAL FRAME MEMBERS THAT SPAN OVER 120" BETWEEN THEIR SUPPORTS (NOT REQUIRED IF THE UNSUPPORTED SPAN IS 120" OR LESS & THE JOB DESIGN ALLOWS FOR NO REINFORCEMENT).

REINFORÇEMENT TYPE R3 MUST BE PLACED BETWEEN SUPPORTS IN ALL CORNER VERTICAL FRAME MEMBERS THAT SPAN OVER 120" BETWEEN THEIR SUPPORTS (NOT REQUIRED IF THE UNSUPPORTED SPAN IS 120" OR LESS & THE JOB DESIGN ALLOWS FOR NO REINFORCEMENT).

REINFORCEMENT IS NOT REQUIRED TO BE CONTINUOUS TOP TO BOTTOM WITHIN THE VERTICAL FRAMING MEMBERS. REINFORCEMENT MAY BE NON--CONTINUOUS, AS

DETERMINED FOR EACH JOB, PROVIDING IT MEETS THE MINIMUM GUIDELINES OF THIS DRAWING. 3. THIS ELEVATION SHOWS THE 1600 CURTAIN WALL SYSTEM 2 IN A MULTI-STORY APPLICATION, THE NUMBER OF FLOORS WITH WHICH THIS SYSTEM MAY BE USED RANGE FROM TWO(2) TO UNUMITED WITH THE ONLY RESTRICTIONS BEING THE MAXIMUM SPAN BETWEEN FLOORS/SUPPORTS AND THE MAXIMUM D.L.O. SIZES SPECIFIED. 9. SPLICING OF VERTICAL FRAME MEMBERS MAY OCCUR BETWEEN SUPPORTS AS REQUIRED. LOCATION OF THOSE SPLICES SHALL BE WHERE A BENDING MOMENT OF

10. THE ELÈVÁTION HERE-IN SHOWS F & T-ANCHORS AT THE BASE OF THE WALL ONLY. THESE ANCHORS MAY ALSO BE USED AT THE TOP OF A WALL IN UEU OF THE WIND/DEAD LOAD ANCHORS SHOWN PROVIDING THE SPAN BETWEEN THE F OR T-ANCHOR AND THE BELOW WIND/DEAD LOAD ANCHORS DOES NOT EXCEED 167

3/4" & THEY ARE INSTALLED THE SAME AS SHOWN AT THE BASE.

(1) MAXIMUM ALLOWABLE BENDING MOMENTS IN **VERTICAL FRAMING MEMBERS** (FOR USE WITH MULTI-SPAN CURTAIN WALL)

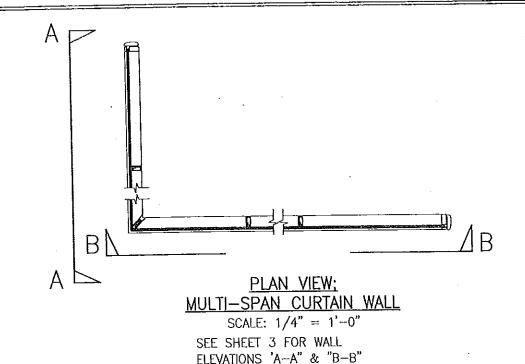
(2) VERTICAL MEMBER	(3) MAXIMUM ALLOWABLE BENDING MOMENT (POS & NEG)
SIDE JAMB MEMBER WITH NO REINFORCEMENT	33816 IN-LB
SIDE JAMB MEMBER WITH REINFORCEMENT "R1"	33816 IN-LB
SIDE JAMB MEMBER WITH REINFORCEMENT "R2"	45801 IN-LB
INTERMEDIATE MEMBER WITH NO REINFORCEMENT	39525 IN-LB
INTERMEDIATE MEMBER WITH REINFORCEMENT "R1"	65028 IN-LB
INTERMEDIATE MEMBER WITH REINFORCEMENT "R2"	87938 IN-LB
CORNER MEMBER WITH NO REINFORCEMENT	(4) 42383 IN-LB
CORNER MEMBER WITH REINFORCEMENT "R3"	(4) 47823 IN-LB

- (1) THE VALUES IS THIS TABLE ARE APPLICABLE TO THE JOB REQUIRED DESIGN OF THE MULTI-SPAN WALL SYSTEM & NEED NOT BE CONSIDERED WITH SINGLE SPAN WALLS. ALL SINGLE SPAN MEMBER & REINFORCEMENT CONDITIONS SHALL BE AS SPECIFICALLY SPECIFIED IN THE SINGLE SPAN ELEVATIONS.
- (2) FOR DESCRIPTIONS OF REINFORCEMENTS, SEE THE "VERTICAL MEMBER REINFORCEMENT LEGEND".
- (3) ALL VALUES ARE BASED ON THE WORSE CASE OF TESTED MOMENT AND ALLOWABLE MOMENT.
- (4) MOMENT VALUE SHOWN FOR THE CORNER MULLION IS DUE TO THE RESULTANT LOAD IN THE PLANE OF THE MULLION (LOAD FROM BOTH SIDES COMBINED INTO A RESULTANT). FOR SINGLE SIDE LOAD (LOAD VECTOR 45 DEGREES TO MULLION ANGLE), IN THE DIRECTION OF THE SIDE LOAD, THE ALLOWABLE MOMENT SHALL NOT EXCEED 29970 IN-LB WHEN NON-REINFORCED NOR 33816 IN-LB. WHEN REINFORCED.

ANCHOR REACTION LOAD CAPACITY (MULTI-SPAN CURTAIN WALL)

	ANCHOR SYMBOL	DESCRIPTION	ÀΙ	LOWA CTION	BĻE
	H	SIDE JAMB WIND LOAD ANCHOR		2297	LBS
	Δ	SIDE JAMB DEAD LOAD ANCHOR		2297	LBS
ſ	H	INTERMEDIATE WIND LOAD ANCHOR		4417	LBS
	\oplus	CORNER WIND LOAD ANCHOR	(2)	3248	LBS
	Δ	INTERMEDIATE DEAD LOAD ANCHOR		4417	LBS
ſ	\Phi	CORNER DEAD LOAD ANCHOR	(2)	3248	LBS
ſ	-	STANDARD T-ANCHOR		2096	LBS
	•	CORNER T-ANCHOR	(2)	677	LBS
	· 🕰	F-ANCHOR (FRAME MEMBER ENDS)		1092	LBS

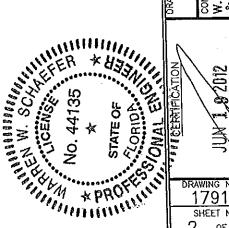
- (1) MAXIMUM ALLOWABLE REACTION LOADS SHOWN CONSIDER REACTIONS FROM WIND LOADS ONLY & APPLY TO BOTH POSITIVE & NEGATIVE WIND DIRECTIONS. IN ADDITION TO WIND LOADS, THE CURTAIN WALL DESIGN ENGINEER OF RECORD FOR EACH PROJECT SHALL ALSO CONSIDER OTHER APPLICABLE LOADS SUCH AS, BUT POSSIBLY NOT LIMITED TO, DEAD LOADS FROM THE CURTAIN WALL WEIGHT.
- (2) REACTION LOAD SHOWN FOR THE CORNER ANCHORS IS THE RESULTANT LOAD IN THE PLANE OF THE MULLION (LOAD FROM BOTH SIDES COMBINED INTO A RESULTANT). FOR EITHER SIDE LOAD, THE ALLOWABLE REACTION LOAD SHALL NOT EXCEED 2297 LB. FROM EITHER SIDE FOR THE WIND & DEAD LOAD ANCHORS NOR 479 LBS FROM EITHER SIDE FOR THE T-ANCHOR.



PRODUCT REVISED as complying with the Florida Mianel Rede Product Control

PRODUCT REVISED as complying with the Florida Miami Dade Product Control

NOTE: INFORMATION ON THIS SHEET APPLIES TO ELEVATIONS ON SHEET 3 ONLY.



1791

CHECKED BY

W.W.S. 04/23/12

W.W.S.

(L.M.I.)

CURTAIN

SYSTEM

SHEET NO. 2 of 16

